

REMARKS

Claims 1-8 are pending in the application, of which claim 1 is independent. No claims have been amended. No claims have been withdrawn. No claims have been canceled. The abstract has been replaced as per request of the Examiner. No new matter has been added. Applicants respectfully submit that the claims define over the art of record and should be passed to allowance.

The pending application is generally directed to a method for analyzing data link messages that includes assigning each data link message to one of a plurality of message groups according to the message type field, and displaying a list of the field contents for each message content field, the list being filtered to remove repeated incidence of the same content.

Claim Rejections under 35 U.S.C. §103

Claim 1-8 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,835,059 Nadel et al. (hereafter Nadel) in view of U.S. Patent No. 4,110,605 of Miller (hereafter Miller), and further in view of U.S. Patent No. 5,673,031 of Meier (hereafter Meier). The Applicant respectfully traverses the rejection with the following arguments.

Nadel is generally directed to a Mode S radio frequency transmission system with coordinated use of a rotating directional antennae and omni-directional antennas. A software-implemented prefilter processes messages destined for aircraft and prevents uplink message transmission to a transponder from coinciding with surveillance interrogation from the rotating antenna.

Miller is generally directed to an aircraft weight and balance computer apparatus that processes sensor outputs to generate an electrical signal proportional to the aircraft gross weight at take-off, and continually updates the weight signal to account for burn-off of fuel or other weight loss during flight. The computer apparatus also measures the location of the aircraft's center of gravity during flight.

Meier is generally directed to a redundant network and communication protocol which requires that a roaming terminal wishing to initiate communication must first determine that the

channel is clear by listening for an entire interpoll gap time. In this way it detects when a “hidden” terminal is communicating.

Applicant respectfully submits that the combination of applied references fails to establish a *Prima Facie* case of obviousness with respect to claims 1-8. Nadel, Miller and Meier, alone or in any combination, fail to teach or suggest each and every element of the claimed invention. Specifically, the three references fail to teach or suggest a method of analyzing received data link messages, including, *“receiving a plurality of data link messages, each of the data link messages being formatted digital data sequences transmitted between units... assigning each data link message to one of a plurality of message groups according to the message type field so that each group contains data link messages of a specific message type, and within each of the message groups, tabulating the messages so as to align corresponding message content fields, displaying the tabulated messages so that the corresponding message content fields are aligned, and displaying a list of the field contents for each message content field, the list being filtered to remove repeated incidence of the same content,”* as recited in claim 1. The Office Action cites column 18, lines 30-64, as evidence that Nadel assigns each data link message to one of a plurality of message groups according to the message type field so that each group contains data link messages of a specific message type. Applicant respectfully submits that the cited passage does not establish that Nadel assigns each data link message to one of a plurality of message groups according to the message type field so that each group contains data link messages of a specific message type. The cited passage establishes that the scheduling software “prioritizes messages based on the criticality of message type” for allocating time (column 18, lines 53-56), however, scheduling messages for transmission is not equivalent to assigning each data link message to one of a plurality of message groups according to the message type field so that each group contains data link messages of a specific messages type as recited in claim 1. Miller and Meyer do not cure this deficiency in Nagel, thus, Nagel, Miller and Meyer, alone or in combination fail to disclose this element of claim 1.

Additionally, the combination of the three references fails to teach or suggest *“displaying a list of the field contents for each message content field, the list being filtered to remove repeated incidence of the same content,”* as recited in claim 1. The Office Action concedes that Nadel and Miller do not teach the list being filtered to remove repeated incidence of the same

content, but the Office Action cites column 11, lines 50-65, as evidence that Meier teaches detecting the duplicated message by removing or discarding the duplicated content data link message. Applicant respectfully submits that Meier does not teach *“displaying a list of the field contents for each message content field, the list being filtered to remove repeated incidence of the same content.”* Meier is a networking system, for handling analog transmissions, that is redundant, message traffic is duplicated to ensure that it arrives, (column 9, lines 7-19). The data-link layer of Meier later deletes the duplicate copies of the same message before the message is saved in a datastructure. In contrast, the invention of the present application filters the datastructure, i.e., list, to remove repeated incidence of the same content within different messages. Deleting duplicate messages in transport is not equivalent to filtering a list to remove repeated incidences of the same content. The present invention facilitates analysis of data link messages by presenting the user with a list of the common entries for a particular field type and any spurious or unusual entries. This enables a user to zoom in on erroneous messages and efficiently debug the message handling system. Meier does not assist the skilled person in displaying the message contents of different messages in a way that reveals anomalous messages, as in the present application. Nadel and Miller do not cure this deficiency in Meier. Nadel, Miller and Meier, alone or in any combination, fail to teach or suggest all of the elements of claim 1, thus claim 1 is patentable. Claims 2-7 depend from claim 1 and are therefore patentable as being therefrom, in addition to recitation of further patentable subject matter.

Applicant further submits that there is no teaching, suggestion, or motivation to combine the applied references. Nadel is concerned with scheduling the transmission of data to prevent interference between multiple transmission sources. Miller is concerned with monitoring the shift of an aircraft's center of mass during takeoff, flight, and landing in order to improve aircraft performance and increase safety. Meier is concerned with a redundant network and communication protocol to determine the most efficient pathways from a source to a destination. Meier was filed in 1994 so the radio frequency communications taught by Meier were likely analog. A person skilled in the art would not combine a system for scheduling the transmission of data, with an apparatus for improving aircraft performance and safety, and a redundancy network and communication protocol for analog messages, in order to create a method for analyzing received digital data link messages that reduces the time required to analyze the data. The three references lie in different fields, solve three unique and distinct problems, that are

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different from the problem solved by the instant application, and, thus, can only be brought together by engaging in hindsight. There is no suggestion or motivation in any of the three references, or in the knowledge generally available to one of ordinary skill in the art, to combine the applied references. The criteria for a *Prima Facie* case of obviousness are not met, thus, claims 1-8 are patentable. Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 1-8.

CONCLUSION

In view of the above arguments, Applicant respectfully requests the Examiner to reconsider and to withdraw the current rejection and pass the claims into allowance.

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